PALM Intranet

Application Number [ ] Submit

IDS Flag Clearance for Application 10700539

IDS Information

Content	Mailroom Date	Entry Number	IDS Review	Last Modified	Reviewer
Update					

Refine Search

Your wildcard search against 10000 terms has yielded the results below.
Your result set for the last L# is incomplete.
The probable cause is use of unlimited truncation. Revise your search strategy to use limited truncation.
Search Results -

Terms	Documents
L23 and ((track$ or monitor$ or follow$) with speed$) and (downshift$ same brak$)	3

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L27

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Monday, July 10, 2006 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR		
L27	L23 and ((track$ or monitor$ or follow$) with speed$) and (downshift$ same brak$)	3	L27
L26	L23 and (track$ with speed$) and (downshift$ same brak$)	0	L26
L25	L23 and (track$ with speed$) and ((accelerat$ or decelerat$)) and (downshift$ same brak$)	0	L25
L24	L23 and (track$ with speed$) and ((accelerat$ or decelerat$) and pedal$) and (downshift$ same brak$)	0	L24
L23	l19 or l20 or l21 or l22	67	L23
L22	('6832147'| '6236929'| '6360156'| '6411882')[URPN]	12	L22
	DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		

L21	(6078859 | 5957991 | 5673668 | 5685801 | 4169437 | 6259983 | 5154250 | 6017290 | 5400865 | 6304809 | 5216915 | 6104976 | 4849892 | 6073509 | 6078860 | 6220987 | 5284116 | 6279531 | 5129475 | 5507705 | 5752211 | 5099941 | 5478293 | 5978726 | 5394954 | 6278915 | 6125321 | 6208929 | 5365436 | 5778331 | 5123397 | 6023647 | 0037793 | 5608626 | 6141618 | 5484350 | 6295500 | 6067495 | 4819163 | 5243526 | 4615316 | 4896267 | 6178371 | 6298300 | 5245542 | 5501109 | 4870584)![PN]	47	L21
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR		
L20	('6832147'| '6236929'| '6360156'| '6411882')[ABPN1,NRPN,PN,TBAN,WKU]	8	L20
L19	L3 or 701/95,96.ccls	4	L19
	DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
L18	L12 and (accelerat$ and pedal$)	2	L18
L17	L12 and brak$	4	L17
L16	L15 and monitor$	0	L16
L15	L14 and (track$ with speed$)	1	L15
L14	L12 and (compar$ with torque$)	1	L14
L13	L12 and torque$	3	L13
L12	6374173.pn. or 20020177935 or 4870583.pn. or 5758306.pn.	4	L12
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; THES=ASSIGNEE; PLUR=YES; OP=OR		
L11	L10 and shift$	13	L11
L10	L9 and down$	23	L10
L9	L6 or L7	41	L9
L8	L6 and L7	34	L8
L7	L5 and @ad<=20021106	41	L7
L6	L5 and @pd<=20021106	34	L6
L5	L1 AND (track$ with speed)	66	L5
L4	L3 AND (track$ with speed)	0	L4
L3	L1 AND L2	4	L3
L2	(477/110).CCLS.	435	L2
L1	(701/93).CCLS.	792	L1

END OF SEARCH HISTORY

Hit List

First Hit Your wildcard search against 10000 terms has yielded the results below.

Your result set for the last L# is incomplete.

The probable cause is use of unlimited truncation. Revise your search strategy to use limited truncation.

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 5778331 A

L27: Entry 1 of 3 File: USPT Jul 7, 1998

US-PAT-NO: 5778331
DOCUMENT-IDENTIFIER: US 5778331 A

TITLE: Kickdown delay in cruise control for automatic transmission

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 2. Document ID: US 5685801 A

L27: Entry 2 of 3 File: USPT Nov 11, 1997

US-PAT-NO: 5685801
DOCUMENT-IDENTIFIER: US 5685801 A

TITLE: Cruise control overspeed reduction with automatic transmission

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

☐ 3. Document ID: US 5484350 A

L27: Entry 3 of 3 File: USPT Jan 16, 1996

US-PAT-NO: 5484350
DOCUMENT-IDENTIFIER: US 5484350 A

TITLE: Control system for vehicle automatic transmission

Full | Title | Citation | Front | Review | Classification | Date | Reference | Claims | KWIC | Draw De

Clear | Generate Collection | Print | Fwd Refs | Bkwd Refs | Generate OACS

Terms | Documents

L23 and ((track$ or monitor$ or follow$) with speed$) and (downshift$ same brak$)	3

Display Format: - Change Format

Previous Page Next Page Go to Doc#

L27: Entry 1 of 3 File: USPT Jul 7, 1998

US-PAT-NO: 5778331
DOCUMENT-IDENTIFIER: US 5778331 A

TITLE: Kickdown delay in cruise control for automatic transmission

DATE-ISSUED: July 7, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leising; Maurice B.	Clawson	MI		
Benford; Howard L.	Bloomfield Hills	MI		
Dourra; Hans A.	Dearborn Heights	MI		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Chrysler Corporation	Auburn Hills	MI			02

APPL-NO: 08/663822 [PALM]
DATE FILED: June 14, 1996

INT-CL-ISSUED: [06] G06 G 7/70

US-CL-ISSUED: 701/66; 701/53, 701/58, 701/93, 477/148, 477/149, 477/108
US-CL-CURRENT: 701/66; 477/108, 477/148, 477/149, 701/53, 701/58, 701/93

FIELD-OF-CLASSIFICATION-SEARCH: 364/424.08, 364/424.081, 364/424.082, 364/424.083, 364/424.085, 364/424.041, 364/426.043, 477/108, 477/105, 477/110, 477/107, 477/111, 477/120, 477/65, 477/131, 477/128, 74/335, 74/336R
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4314340	February 1982	Miki et al.	364/424.091
☐	4414863	November 1983	Heino	477/63
☐	4658929	April 1987	Katou et al.	180/175
☐	4709595	December 1987	Hayama	477/108
☐	4875391	October 1989	Leising et al.	364/424.08

☐	4905545	March 1990	Leising et al.	364/424.08
☐	4951200	August 1990	Leising et al.	364/424.08
☐	5051905	September 1991	Yoshida	364/424.082
☐	5053963	October 1991	Mack	364/424.082
☐	5393277	February 1995	White et al.	477/108
☐	5468198	November 1995	Holbrook et al.	477/143
☐	5669850	September 1997	Dourra et al.	477/108

ART-UNIT: 364

PRIMARY-EXAMINER: Louis-Jacques; Jacques H.

ATTY-AGENT-FIRM: Calcaterra; Mark P.

ABSTRACT:

An interactive cruise control system and method for providing automatic speed control of a vehicle with improved shifting of an automatic transmission. The system and method controls speed of a vehicle equipped with cruise control and minimizes downshifts in an automatic transmission of the vehicle. Vehicle speed is detected and compared with a setpoint speed which is associated with the cruise control system. Transmission gear shifting is determined based on predetermined shift schedule points. Determined transmission gear downshifts are prevented for a kickdown delay period based on vehicle speed loss and the presence of vehicle deceleration. Also provided is an overspeed reduction method for causing a transmission downshift during an overspeed condition with the throttle closed. Further, the system provides hunting prevention between both second gear and third gear as well as between third gear and fourth gear for a four speed automatic transmission.

11 Claims, 11 Drawing figures

Previous Doc Next Doc Go to Doc#

L27: Entry 1 of 3 File: USPT Jul 7, 1998

DOCUMENT-IDENTIFIER: US 5778331 A
TITLE: Kickdown delay in cruise control for automatic transmission

Brief Summary Text (7):
A vehicle is generally equipped with an electronic engine control system for controlling the operation of the engine and drivetrain of the vehicle. The electronic control system includes a microcomputer-based transmission control module capable of receiving and monitoring input signals indicative of various vehicle operating conditions such as engine speed, torque converter turbine speed, vehicle output speed, throttle angle position, brake application, hydraulic pressures, a driver selected gear or operating condition (PRNODDL), engine coolant temperature and/or the ambient air temperature. Based on the information contained in the monitored signals, the controller generates command or control signals for causing actuation of solenoid-actuated valves to regulate the application and release of fluid pressure to and from apply cavities of clutches or frictional elements of the transmission. Accordingly, the controller is typically programmed to execute predetermined shift schedules stored in memory of the controller through appropriate command signals to the solenoid-actuated valves.

Detailed Description Text (30):
The interactive cruise control system 10 further includes an overspeed reduction feature as shown by methodology 200 in FIGS. 8A and 8B. Overspeed reduction methodology 200 operates to provide an automatic downshift of the automatic transmission to increase engine braking during the presence of an overspeed condition while operating the vehicle in cruise control. This advantageously brakes the vehicle to reduce speed so as to bring the vehicle speed to within an acceptable speed range according to the setpoint speed of the cruise control system 10.

L27: Entry 2 of 3 File: USPT Nov 11, 1997

US-PAT-NO: 5685801
DOCUMENT-IDENTIFIER: US 5685801 A

TITLE: Cruise control overspeed reduction with automatic transmission

DATE-ISSUED: November 11, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Benford; Howard L.	Bloomfield Hills	MI		
Dourra; Hans A.	Dearborn Heights	MI		
Leising; Maurice B.	Clawson	MI		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Chrysler Corporation	Auburn Hills	MI			02

APPL-NO: 08/663497 [PALM]
DATE FILED: June 14, 1996

INT-CL-ISSUED: [06] B60 K 41/08

US-CL-ISSUED: 477/108
US-CL-CURRENT: 477/108

FIELD-OF-CLASSIFICATION-SEARCH: 477/108
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4535865	August 1985	Tanigawa et al.	477/108
☐	4716789	January 1988	Suzuki	477/108
☐	4736813	April 1988	Hayamam et al.	477/108
☐	4875391	October 1989	Leising et al.	
☐	4905545	March 1990	Leising et al.	
☐	4951200	August 1990	Leising et al.	

☐	4982805	January 1991	Naitou et al.	477/108

ART-UNIT: 352

PRIMARY-EXAMINER: Wright; Dirk

ATTY-AGENT-FIRM: Calcaterra; Mark P.

ABSTRACT:

An interactive cruise control system and method for providing automatic speed control of a vehicle with improved shifting of an automatic transmission. The system and method controls speed of a vehicle equipped with cruise control and minimizes downshifts in an automatic transmission of the vehicle. Vehicle speed is detected and compared with a setpoint speed which is associated with the cruise control system. Transmission gear shifting is determined based on predetermined shift schedule points. Determined transmission gear downshifts are prevented for a kickdown delay period based on vehicle speed loss and the presence of vehicle deceleration. Also provided is an overspeed reduction method for causing a transmission downshift during an overspeed condition with the throttle closed. Further, the system provides hunting prevention between both second gear and third gear as well as between third gear and fourth gear of a four speed automatic transmission.

9 Claims, 11 Drawing figures

Previous Doc Next Doc Go to Doc#

L27: Entry 2 of 3 File: USPT Nov 11, 1997

DOCUMENT-IDENTIFIER: US 5685801 A
TITLE: Cruise control overspeed reduction with automatic transmission

Brief Summary Text (7):
A vehicle is generally equipped with an electronic engine control system for controlling the operation of the engine and drivetrain of the vehicle. The electronic control system includes a microcomputer-based transmission control module capable of receiving and monitoring input signals indicative of various vehicle operating conditions such as engine speed, torque converter turbine speed, output vehicle speed, throttle angle position, brake application, hydraulic pressures, a driver selected gear or operating condition (PRNODDL), engine coolant temperature and/or the ambient air temperature. Based on the information contained in the monitored signals, the controller generates command or control signals for causing actuation of solenoid-actuated valves to regulate the application and release of fluid pressure to and from apply cavities of clutches or frictional elements of the transmission. Accordingly, the controller is typically programmed to execute predetermined shift schedules stored in memory of the controller through appropriate command signals to the solenoid-actuated valves.

Brief Summary Text (16):
To achieve the foregoing objectives, the present invention is an interactive cruise control system and method for providing automatic speed control of a vehicle with improved shifting of an automatic transmission. The system and method controls speed of a vehicle equipped with cruise control and reduces overspeed conditions by downshifting the automatic transmission. Vehicle speed is detected and compared with a setpoint speed which is associated with the cruise control system. The cruise control system determines when the detected vehicle speed exceeds the setpoint speed by an overspeed value and further monitors the position of the throttle of the vehicle and determines if the throttle is in a substantially closed position. A downshift of the automatic transmission is caused when the vehicle speed exceeds the setpoint speed by the overspeed value while the throttle position is substantially closed so as to brake the vehicle to attempt to bring the vehicle speed closer to the setpoint speed.

Detailed Description Text (30):
The interactive cruise control system 10 further includes an overspeed reduction feature as shown by methodology 200 in FIGS. 8A and 8B. Overspeed reduction methodology 200 operates to provide an automatic downshift of the automatic transmission to increase engine braking during the presence of an overspeed condition while operating the vehicle in cruise control. This advantageously brakes the vehicle to reduce speed so as to bring the vehicle speed to within an acceptable speed range according to the setpoint speed of the cruise control system 10.

CLAIMS:

1. A method of controlling speed of a vehicle equipped with an automatic transmission and cruise speed control, said method comprising the steps of:

storing a setpoint speed associated with the cruise speed control;

detecting speed of the vehicle;

comparing the detected speed of the vehicle with the setpoint speed;

determining when the detected vehicle speed exceeds the setpoint speed by an overspeed value;

monitoring throttle position of the vehicle and determining if a throttle closed condition exists; and

causing a transmission downshift in the automatic transmission when the vehicle speed exceeds the setpoint speed by said overspeed amount while the throttle position is substantially closed so as to brake the vehicle.

4. A method of controlling speed of a vehicle equipped with an automatic transmission and cruise speed control so as to maintain a driver selected setpoint speed by causing engine braking for an overspeed condition, said method comprising the steps of:

storing a setpoint speed associated with the cruise speed control;

detecting speed of the vehicle;

comparing the detected speed of the vehicle with the setpoint speed;

determining when the detected vehicle speed exceeds the setpoint speed by an predetermined overspeed value;

monitoring throttle position of the vehicle and determining if a substantially closed throttle condition exists which is indicative of an attempt to reduce vehicle speed; and

causing a transmission downshift in the automatic transmission when the vehicle speed exceeds the setpoint speed by said overspeed amount while the throttle position is substantially closed so as to brake the vehicle in an attempt to overcome the overspeed condition.

Previous Doc Next Doc Go to Doc#

First Hit Fwd Refs Previous Doc Next Doc Go to Doc#
End of Result Set

☐ Generate Collection | Print

L27: Entry 3 of 3 File: USPT Jan 16, 1996

US-PAT-NO: 5484350
DOCUMENT-IDENTIFIER: US 5484350 A

TITLE: Control system for vehicle automatic transmission

DATE-ISSUED: January 16, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ishikawa; Hiroshi	Wako			JP
Furukawa; Hideo	Wako			JP
Shimizu; Masatoshi	Wako			JP
Nakauchi; Norio	Wako			JP

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Honda Giken Kogyo Kabushiki Kaisha	Tokyo			JP	03

APPL-NO: 08/295546 [PALM]
DATE FILED: August 25, 1994

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY	APPL-NO	APPL-DATE
JP	5-238896	August 31, 1993

INT-CL-ISSUED: [06] F16 H 59/04, F16 H 59/62

US-CL-ISSUED: 477/97; 477/120
US-CL-CURRENT: 477/97; 477/120

FIELD-OF-CLASSIFICATION-SEARCH: 477/97, 477/120
See application file for complete search history.

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected | Search ALL | Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4285252	August 1981	Yamaki et al.	
☐	4795015	January 1989	Hibino et al.	477/97

☐	4943921	July 1990	Baltusis et al.	477/97
☐	4947971	August 1990	Tanaka	477/97

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	CLASS
5-17626	March 1993	JP	

ART-UNIT: 352

PRIMARY-EXAMINER: Wright; Dirk

ATTY-AGENT-FIRM: Armstrong, Westerman, Hattori, McLeland & Naughton

ABSTRACT:

A control system of a vehicle automatic transmission in which an engine load and a vehicle speed are detected and used to determine a vehicle acceleration in accordance with the preestablished characteristics. An actual vehicle acceleration is at the same time calculated in response to the detected vehicle speed. The difference therebetween is then calculated and the calculated value is added to a difference calculated earlier to obtain an average therebetween. Five gear shifting scheduling maps, for example one for moderate hill climbing, one for level-road running, one for steep hill descent, are preestablished and in response to the average obtained, one of the maps is selected. A gear shifting is controlled based on the selected map. The actual vehicle acceleration is corrected by the altitude where the vehicle is traveling so as to compensate for the engine output decrease due to the charging efficiency drop.

5 Claims, 33 Drawing figures

Previous Doc Next Doc Go to Doc#

L27: Entry 3 of 3 File: USPT Jan 16, 1996

DOCUMENT-IDENTIFIER: US 5484350 A
TITLE: Control system for vehicle automatic transmission

Detailed Description Text (51):
If step S716 determines that the current map (number) is the level-road running map (number), the program passes to step S718 in which the vehicle speed is compared with a prescribed value YKUV1, and if it determines that the current map (number) is not the level-road running map (number), i.e if it determines that the current map (number) is the moderate hill climbing map (number), the program passes to step S720 in which the vehicle speed is compared with another prescribed value YKUV3. If the vehicle speed is found to be equal to or greater than the prescribed value in either of steps S718 or S720, the program skips to step S712 and map switching is carried out. This will be better understood from FIG. 24. As was explained earlier, the breadth of the third gear range is greater in the maps for hill climbing and descent than in the map for level-road running. As shown specifically in FIG. 24, the boundary vehicle speed for shifting from third gear to fourth gear when the map is changed from that for level-road running to that for moderate hill descent is set as vehicle speed YKUV1. Since there is therefore no possibility of a shift-down when the vehicle speed is equal to or higher than the boundary speed, the program is passed to step S712 for switching maps. On the other hand, if the vehicle speed is found to be below the boundary level, the possibility of a downshifting exists and, therefore, a determination is carried out in the following steps as to whether or not one will. While FIG. 24 relates only to the case of switching from the level-road running map (#2) to the moderate hill descent map (#3), switching from the moderate hill descent map (#3) to the steep hill descent map (#4) is handled in a similar manner.

Detailed Description Text (56):
This is conducted notwithstanding that the driver has applied the brakes and wants to slow down and is for preventing map switching and thus avoiding an abrupt engine braking effect (owing to downshifting) which would otherwise occur at an intensity that increases in proportion to the vehicle speed at the time of the shift-down. Therefore, it is arranged such that more degree of actual deceleration data is required for map switching as the vehicle speed becomes higher. Thus, the map is changed to enable downshifting only when it is determined from the result of the comparison that rapid deceleration is intended. In other words, the braking operation indicates that the driver wants to slow down. At that condition, if the braking suffices the driver's intended deceleration, to conduct shift-down to make the vehicle to further slow down will not meet the driver's intention and hence is avoided. Moreover, downshifting makes the vehicle to travel at a lower gear (i.e., run at a greater gear ratio) than usual and as a result engine speed rises so that the engine becomes noisier. In particular, with the increasing steepness of the downhill vehicle speed rises and engine speed tends to rise. The degree of deceleration data is therefore predetermined taking the vehicle speed and road profile (grade) into account in such a manner that the degree of deceleration data grows with increasing downhill grade and/or with increasing vehicle speed so that the addition of MAPS at step S712 is hard to occur, i.e., switching to the maps for hill descent having the broader low gear region is not likely to occur.